

ABSTRACT OF THE DISCLOSURE

An imaging tomography apparatus, in particular an x-ray computed tomography apparatus, has two acquisition systems capable of rotating around a common rotation axis. Each of the acquisition systems has a radiator as well as a detector. The maximum measurement fields scanned by the two acquisition systems given rotation around the rotation axis are of different sizes, or can be adjusted to different sizes. In particular, the lengths of both detectors measured in the azimuthal direction – are of different sizes. The tomography apparatus can be fashioned to scan the entire body cross-section of an examination subject or of a patient with conventional temporal resolution, and to scan detail region, such as a heart region, with an increased temporal resolution or accelerated data acquisition rate in comparison to a device with only one acquisition system.

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